

What is Claimed Is:

1. A method in an Internet Protocol (IP) based router, the method comprising:  
parsing a router command that specifies an address prefix identifier;  
retrieving an address prefix value for the address prefix identifier; and  
executing the router command based on applying the address prefix value as an operand in  
5 the router command.

2. The method of claim 1, further comprising:  
receiving, according to a prescribed protocol, the address prefix value for use by the router  
via an IP link from an authoritative source, authorized to assign the address prefix value to the  
router; and  
storing the address prefix value internally within the router in a prescribed location associated  
with the address prefix identifier.

3. The method of claim 2, wherein the receiving step includes generating a request from the  
authoritative source for the address prefix value based on a determined absence of the address prefix  
value in the prescribed location.

4. The method of claim 1, further comprising:  
receiving a new address prefix value to be executed in the router command; and  
updating a storage location, associated with the address prefix identifier and that specifies  
the address prefix value, to include the new address prefix value;  
wherein the executing step includes applying at least one of the address prefix value and the  
new address prefix value as the operand.

5. The method of claim 4, wherein the receiving step includes detecting a specified  
expiration event associated with the address prefix value, the executing step including not applying  
the address prefix value after the corresponding specified expiration event.

6. The method of claim 5, wherein the executing step includes executing the router command for each of the address prefix value and the new address prefix value, based on the executing step being performed before the specified expiration event.

7. The method of claim 1, wherein the executing step includes:  
detecting within the router command an address prefix mask and an address suffix for specifying a router interface; and  
generating an IP address for the router interface based on applying the address prefix mask to the address prefix value and appending the address suffix.

8. An Internet Protocol (IP) based router comprising:  
a routing configuration file configured for storing router commands, at least one router command specifying an address prefix identifier;  
a memory configured for storing an address prefix value associated with the address prefix  
5 identifier;  
a processor configured for executing the router command based on applying the address prefix value as an operand in the router command; and  
an interface configured for routing an IP packet according to execution of the router command.

9. The router of claim 8, wherein:  
the interface is configured for receiving the address prefix value via an IP link from an authoritative source according to a prescribed protocol executed by the processor, the processor configured for storing the address prefix value in the memory at a prescribed location associated with the address prefix identifier.

10. The router of claim 9, wherein the processor is configured for generating a request from the authoritative source for the address prefix value based on a determined absence of the address prefix value in the prescribed location.

11. The router of claim 8, wherein:

the interface is configured for receiving a new address prefix value to be executed in the router command; and

the processor is configured for updating a storage location in the memory, associated with the address prefix identifier and that specifies the address prefix value, to include the new address prefix value, the processor configured for applying at least one of the address prefix value and the new address prefix value as the operand.

12. The router of claim 11, wherein the processor, in response to detecting a specified expiration event associated with the address prefix value, selectively avoids applying the address prefix value after the corresponding specified expiration event.

13. The router of claim 12, wherein the processor is configured for executing the router command for each of the address prefix value and the new address prefix value, based on determining that execution thereof is being performed before the specified expiration event.

14. The router of claim 8, wherein the processor, in response to detecting within the router command an address prefix mask and an address suffix for specifying a router interface, generates an IP address for the router interface based on applying the address prefix mask to the address prefix value and appending the address suffix.

15. A computer readable medium having stored thereon sequences of instructions for routing packets by an Internet Protocol (IP) based router, the sequences of instructions including instructions for:

parsing a router command that specifies an address prefix identifier;

retrieving an address prefix value for the address prefix identifier; and

executing the router command based on applying the address prefix value as an operand in the router command.

16. The medium of claim 15, further comprising instructions for:  
receiving, according to a prescribed protocol, the address prefix value for use by the router via an IP link from an authoritative source, authorized to assign the address prefix value to the router; and  
storing the address prefix value internally within the router in a prescribed location associated with the address prefix identifier.

17. The medium of claim 16, wherein the receiving step includes generating a request from the authoritative source for the address prefix value based on a determined absence of the address prefix value in the prescribed location.

18. The medium of claim 15, further comprising instructions for:  
receiving a new address prefix value to be executed in the router command; and  
updating a storage location, associated with the address prefix identifier and that specifies the address prefix value, to include the new address prefix value;  
wherein the executing step includes applying at least one of the address prefix value and the new address prefix value as the operand.

19. The medium of claim 18, wherein the receiving step includes detecting a specified expiration event associated with the address prefix value, the executing step including not applying the address prefix value after the corresponding specified expiration event.

20. The medium of claim 19, wherein the executing step includes executing the router command for each of the address prefix value and the new address prefix value, based on the executing step being performed before the specified expiration event.

21. The medium of claim 15, wherein the executing step includes:

detecting within the router command an address prefix mask and an address suffix for specifying a router interface; and

generating an IP address for the router interface based on applying the address prefix mask to the address prefix value and appending the address suffix.

22. An Internet Protocol (IP) based router comprising:

means for parsing a router command that specifies an address prefix identifier;

means for retrieving an address prefix value for the address prefix identifier; and

means for executing the router command based on applying the address prefix value as an operand in the router command.

23. The router of claim 22, further comprising:

means for receiving, according to a prescribed protocol, the address prefix value for use by the router via an IP link from an authoritative source, authorized to assign the address prefix value to the router; and

means for storing the address prefix value internally within the router in a prescribed location associated with the address prefix identifier.

24. The router of claim 23, wherein the receiving means is configured for generating a request from the authoritative source for the address prefix value based on a determined absence of the address prefix value in the prescribed location.

25. The router of claim 22, wherein:

the receiving means is configured for receiving a new address prefix value to be executed in the router command; and

the storing means is configured for updating a storage location, associated with the address prefix identifier and that specifies the address prefix value, to include the new address prefix value;

wherein the executing means is configured for applying at least one of the address prefix value and the new address prefix value as the operand.

26. The router of claim 25, wherein the executing means is configured for detecting a specified expiration event associated with the address prefix value, the executing means configured for not applying the address prefix value after the corresponding specified expiration event.

27. The router of claim 26, wherein the executing means is configured for executing the router command for each of the address prefix value and the new address prefix value, based on the execution of the router command being performed before the specified expiration event.

28. The router of claim 22, wherein the executing means is configured for detecting within the router command an address prefix mask and an address suffix for specifying a router interface, and generating an IP address for the router interface based on applying the address prefix mask to the address prefix value and appending the address suffix.